



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

May 10, 2001

Colonel James G. May
District Engineer, Jacksonville District
Regulatory Division, South Permits Branch
Department of the Army, Corps of Engineers
400 North Congress Avenue, Suite 130
West Palm Beach, Florida 33401

Dear Colonel May:

The National Marine Fisheries Service (NMFS) has reviewed your staff's letter dated April 10, 2001, regarding permit application number 200000380 (IP-BM). The applicant, Town of Palm Beach, proposes nourishment of approximately 1.9 miles of beach shoreline along the Atlantic Ocean at Phipps Ocean Park Beach, Palm Beach County, Florida. The NMFS, by letter dated April 14, 2000, requested additional information and provided Essential Fish Habitat (EFH) Conservation Recommendations in our letter of August 16, 2000. The NMFS has objected to authorization of the project pursuant to Part V, paragraph 3(a) of our Clean Water Act 404(q) Memorandum of Agreement (MOA) based on unacceptable impacts to EFH, Habitat Areas of Particular Concern (HAPC), and other NMFS trust resources. The Regional Administrator for the NMFS Southeast Region reinforced this position on September 5, 2000, pursuant to Part IV paragraph 3(b) of the MOA.

Responses to our EFH Conservation Recommendations were provided in a letter from the applicant, dated January 25, 2001. Our EFH recommendations and concerns and the applicant's responses are provided below.

400-foot hard bottom buffer zone-The NMFS recommended that a 400-foot buffer zone should be placed between the borrow areas and adjacent hard bottom reefs. The buffer zone would reduce the risk of adverse impacts to the hard bottom reefs from turbidity and sedimentation plumes that may be transported from the dredge site. In addition, the buffer zone would reduce the risk of anchor damage or accidental mechanical damage from the dredge head. The applicant has agreed to provide a 400-foot buffer zone and has referenced an unidentified permit sketch depicting the revised borrow area in their letter. A memo, dated June 26, 2000, was included in the correspondence that contains the borrow areas and adjacent hard bottom reefs. However, the proposed cut area of Borrow Area III does not appear to provide a 400-foot buffer zone. Our estimate of the distance between Borrow Area III and the hard bottom reef is less than 200 feet. We request the applicant clarify the information regarding the revised borrow area.



Compensation for impacts temporal losses, and proposed mitigation reef- To compensate for adverse impacts to 5.17 acres of nearshore hard bottom impacts, the applicant has proposed construction of a 2.2-acre limestone artificial reef. Ten separate aerial photographic "snap-shots" taken between 1983 and 1989 were used to estimate the average amount of hard bottom that has existed in this area (i.e. time-averaging method). Based upon these analysis, the applicant has estimated that approximately 2.2 acres of hard bottom have been available as habitat for various marine organisms. The NMFS does not agree that this method of determining mitigation adequately offsets the adverse impacts to marine resources. Compensatory mitigation for impacts should be based upon the existing resources that are adversely affected at the time of construction of the project, and not for an average acreage over a 17 year period. In the event that appropriate avoidance and minimization issues are satisfied, the NMFS recommends mitigation for all acreage of hard bottom habitat impacted by the proposed project.

In addition, the NMFS considers temporal losses to resources impacted to be significant and should be included in the analysis for determining mitigation. The applicant's mitigation plan, dated June 22, 2000, states that "construction of the mitigation reef prior to fill placement will allow for colonization of the reef such that biological productivity of the mitigation reef will be comparable to the impacted reef by the time of project construction." However, the information provided indicates that construction of the mitigation reef is planned for July 2001 and the start of construction of the nourishment project around November 2001. Although the applicant has provided information regarding the colonization rate of other artificial reefs in the area, we are unconvinced that an artificial reef will provide the same ecological complexity and function as a natural hard bottom habitat in as little as four months. We recommend that a time-lag factor be incorporated into the mitigation analysis, such as the National Oceanic and Atmospheric Administration's habitat equivalency analysis for damage assessment and restoration projects.

Mitigation reef monitoring plan- The NMFS recommended that a monitoring plan should be developed to determine the effectiveness of the proposed artificial reef. We recommended ecological comparisons with adjacent hard bottom reefs that examine variables such as indices of recruitment for larval/juveniles, predation rates and prey vulnerability, and size structure of fish and selected invertebrates. The applicant states that monitoring will be performed in collaboration with and following the existing protocols of Palm Beach County Department of Environmental Resource Management (DERM). Although fish counts are included in the monitoring plan and life history stages will be recorded (i.e. juvenile and adult), our review of DERM's monitoring protocols indicates that very little data is gathered to examine larval and juvenile recruitment indices, predation rates, size structure of fish and invertebrates, etc. Several studies have indicated that nearshore hard bottom habitats may be selectively utilized by larval and juvenile fish during cross-shelf migrations (Vare 1991; Lindeman and Snyder 1999). Nearshore hard bottoms may provide new recruits with critical habitat structure that increases survivalship, compared to deeper habitat with potentially greater predation risks. Monitoring protocols should include factors that compare nearshore hard bottom habitats with artificial reefs as larval/juvenile settlement areas.

Shoreline erosion- The section of beach between R-116 and R-126 has never been nourished. From our review of the historical erosion data provided in the Project Justification, dated June 22, 2000, the majority of the shoreline between monuments R-116 and R-126 has either accreted or remained

the same since 1974. Only two areas (monuments R-116 and R-117) had experienced any significant shoreline recession. The applicant's response, dated January 25, 2001, to the U.S. Army Corps of Engineers (COE) regarding predicted erosion in 10 and 15 years under the "No Action" alternative, stated that no additional shoreline recession would occur between R-113 and R-128 due to the presence of exposed nearshore hard bottom, seawalls, or natural rock headland features. We agree with the comments of the U.S. Fish and Wildlife Service, in their letter dated May 5, 2000, which stated that the placement of sand over the nearshore hard bottom may undermine the natural erosion protection that the reefs provide. Based upon our assessment of the proposed project, the limited erosion occurring along small sections of the beach does not justify nourishment of the entire 1.9 miles of shoreline and the resulting adverse impact to resources.

Programmatic Environmental Impact Statement (PEIS)-In review of other beach renourishment projects along the southeast Florida coast, the NMFS has recommended that the COE develop a PEIS for major coastal dredge and fill projects. Considering the direct and indirect adverse impact to EFH, HAPC, and other NMFS-trust resources, the proposed project should be included in a comprehensive PEIS.

Approximately 50 large-scale beach renourishment projects have been completed in southeast Florida over the past 40 years, resulting in over 50 million cubic yards of sand being placed in nearshore environments. In the next 50 years, there are approximately 90 additional large-scale beach renourishment projects planned for the southeast Florida coast. Few of these projects involve federal cost-sharing and preclude consideration of cumulative effects, required under the National Environmental Policy Act. It is the NMFS' opinion that the 1996 Coast of Florida Study (COE 1996) has not fully assessed the function of offshore and near-shore habitats or the potential cumulative impacts associated with beach renourishment projects. A PEIS would provide the COE with the opportunity to evaluate the cumulative effects of repeated burial of nearshore habitats and acute and chronic sedimentation and elevated turbidity that may result from past, current, and future offshore dredging and beach fill projects.

In view of the above, the NMFS continues our MOA objections to the Department of Army authorization for the proposed project. If we can be of further assistance, please advise. Related comments, questions or correspondence should be directed to Michael R. Johnson in Miami. He may be contacted at 305/ 95-8352.

Sincerely,



Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

Literature Cited

- Lindeman, K.C. and D.B. Snyder. 1999. Nearshore hard bottom fishes of southeast Florida and effects of habitat burial caused by dredging. Fish. Bull. 97:508-525.
- U.S. Army Corps of Engineers. 1996. Coast of Florida Erosion and storm effects study: region III with final environmental impact statement. ACOE Tech. Rep., Jacksonville District. 62 pp. plus appendices A-
- Vare, C.N. 1991. A survey, analysis, and evaluation of the nearshore reefs situated off Palm Beach County, Florida. M.S. thesis, Florida Atlantic Univ., Boca Raton, FL. 165 pp.

cc:

EPA, WPB

DEP, WPB

SAFMC, CHAS

FFWCC, TALL

FWS, VERO

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